CLAIMS

1. A method for producing a helical synchronous belt for driving carriage, wherein said helical synchronous belt comprises a back layer, teeth and core cords which are made of a synthetic resin, said method comprising the steps of:

measuring a thrust force exerted on the helical synchronous belt due to a twist angle of the core cord using a strain gauge provided on a driving pulley; and

determining a helical tooth angle and core cord twist angle based on the measured thrust force.

2. A helical synchronous belt having its core cords twisted at an angle opposing to the angle of helical teeth, with the helical tooth angle set to 5° to 15° and core cord twist angle set to 15° to 2°.

3. The helical synchronous belt as described in Claim 2, which has a helical tooth angle of 10°, 7° or 5° and core cord twist angle of 10.2° or 4.8°.

4. The helical synchronous belt as described in Claim 2 or 3, comprising its back layer and teeth made of urethane resin and its core cords made of aramid fiber or glass fiber.

5. The helical synchronous belt as described in any one of Claims 2 to 4, which is used for driving carriage.